National Aeronautics and Space Administration
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The Aviation Safety Reporting System

The Aviation Safety Reporting System (ASRS) was established in 1975 under a Memorandum of Agreement between the Federal Aviation Administration (FAA) and the National Aeronautics and Space Administration (NASA). FAA provides most of the program funding; NASA administers the program and establishes its policies in consultation with the FAA and the aviation community. NASA has chosen to operate the program through a contractor selected via competitive bidding. The current contractor is Battelle Memorial Institute.

Purpose of the Program

The ASRS collects, analyzes, and responds to voluntarily submitted aviation safety incident reports in order to lessen the likelihood of aviation accidents. ASRS data are used to:

- Identify deficiencies and discrepancies in the National Aviation System (NAS) so that these can be remedied by appropriate authorities.
- Support policy formulation and planning for, and improvements to, the NAS.
- Strengthen the foundation of aviation human factors safety research. This is particularly important since it is generally conceded that over two-thirds of all aviation accidents and incidents have their roots in human performance errors.

Confidentiality and Incentives to Report

Pilots, air traffic controllers, flight attendants, mechanics, ground personnel, and others involved in aviation operations submit reports to the ASRS when they are

involved in, or observe, an incident or situation in which aviation safety was compromised. All submissions are voluntary.

Reports sent to the ASRS are held in strict confidence. More than 400,000 reports have been submitted to date and no reporter's identity has ever been breached by the ASRS. ASRS de-identifies reports before entering them into the incident database. All personal and organizational names are removed. Dates, times, and related information, which could be used to infer an identity, are either generalized or eliminated.

The FAA offers ASRS reporters further guarantees and incentives to report. It has committed itself not to use ASRS information against reporters in enforcement actions. It has also chosen to waive fines and penalties, subject to certain limitations, for unintentional violations of federal aviation statutes and regulations, which are reported to ASRS. The FAA's initiation, and continued support of the ASRS program and its willingness to waive penalties in qualifying cases is a measure of the value it places on the safety information gathered, and the products made possible, through incident reporting to the ASRS.

Report Processing

Incident reports are read and analyzed by ASRS's corps of aviation safety analysts. The analyst staff is entirely of experienced pilots and air traffic controllers. Their years of experience are uniformly measured in decades, and cover the full spectrum of aviation activity: air carrier, military, and general aviation; Air Traffic Control in Towers, TRACONS, Centers, and Military Facilities.

Each report received by the ASRS is read by a minimum of two analysts. Their first mission is to identify any aviation hazards, which are discussed in reports and flag that information for immediate action. When such hazards are identified, an alerting message is issued to the appropriate FAA office or aviation authority. Analysts' second mission is to classify reports and diagnose the causes underlying each reported event. Their observations, and the original de-identified report, are then incorporated into the ASRS's database.

Database

The database provides a foundation for specific products and subsequent research addressing a variety of aviation safety issues. ASRS's database includes the narratives submitted by reporters (after they have been sanitized for identifying details). These narratives provide an exceptionally rich source of information for policy development and human factors research. The database also contains coded information from the original report which is used for data retrieval and statistical analyses.

Program Outputs

ASRS uses the information it receives to promote aviation safety in a number of ways:

- **Alerting Messages** When ASRS receives a report describing a hazardous situation - for example, a defective navigation aid, mischarting, a confusing procedure, or any other circumstance which might compromise safe flight -- it issues an alerting message. Alerting messages take a variety of forms but they have a single purpose: to relay safety information to individuals in a position of authority so that they can investigate the allegation and take needed corrective actions. ASRS has no direct operational authority of its own. It acts through, and with the cooperation of, others.

- **CALLBACK** ASRS distributes CALLBACK, a monthly safety bulletin, to more than 85,000 pilots, air traffic controllers, and others. Each issue of CALLBACK includes excerpts from ASRS incident reports with supporting commentary. In addition, CALLBACK may contain summaries of ASRS research studies and related aviation safety information. CALLBACK is one of the ASRS's most effective tools for improving the quality of human performance in the NAS at the grass roots level. Editorial use and reproduction of CALLBACK articles, with appropriate attribution, is encouraged.

- **ASRS DIRECTLINE** New in 1991, ASRS Directline is published periodically to meet the needs of operators and flight crews of complex aircraft, such as commercial carriers and corporate fleets. Articles contained in Directline are based on ASRS reports that have been identified as significant by ASRS analysts. Distribution is directed to operational managers, safety officers, training organizations, and publications departments. Editorial use and reproduction of Directline articles, with appropriate attribution, is encouraged.

- **Database Search Requests** Information in the ASRS database is available to interested parties. Individuals and organizations wishing to access ASRS data on a particular aviation safety subject may contact the ASRS with a statement of need. The ASRS will then search its database for pertinent reports and will print, bind, and mail any information applicable to the request. To date more than 3,000 searches have been accomplished in support of government, industry, and academe. (Note: The ASRS Database is available on CD-ROM. See the "ASRS Database" page for details and ordering information.)

- **Operational Support** Through frequent communications between the two organizations, the ASRS contributes to the FAA's ongoing safety efforts. The ASRS also supports the FAA and the NTSB during rule-makings, procedure/airspace design efforts, accident investigations, and like circumstances by assembling and

digesting relevant information from its database. This is a growing role for the ASRS.

- **Topical Research** ASRS has conducted and published over 58 research studies. ASRS research has always been designed and conducted with an orientation toward real-life operational applications; most have examined human performance in the NAS. Ways are sought to effect incremental improvements in aviation safety through improved procedures, training, design, etc. Recent subjects of ASRS research include: wake turbulence analysis, digital avionics software and hardware problems, TCAS II incidents, cockpit interactions incidents analysis, airport ramp safety incidents, crew performance during aircraft malfunctions, air carrier return-to-land incidents, use of digital flight data to measure safety and crew performance (APMS), and use of ASRS data in the FAA's AQP program.

Summary

The ASRS is a significant facet of the continuing effort by government, industry, and individuals to maintain and improve aviation safety. The ASRS collects voluntarily submitted aviation safety incident/situation reports from pilots, controllers, and others. The ASRS acts on the information these reports contain. It identifies system deficiencies, and issues alerting messages to persons in a position to correct them. It educates through its newsletter CALLBACK, its journal ASRS Directline and through its research studies. Its database is a public repository, which serves the FAA's and NASA's needs and those of other organizations worldwide which are engaged in research and the promotion of safe flight.

Limitations

1. The ASRS assurance of confidentiality and the availability of waivers of disciplinary action do NOT extend to reports of accidents or criminal activity (e.g., hijacking, bomb threats, and drug running). Such reports should not be submitted to ASRS. If such reports are received, they are forwarded identified to cognizant agencies.

2. FAA policies regarding the ASRS are covered by Advisory Circular 00-46D, FAR 91.25, and paragraph 2-38 in the "Facility Operations and Administration" Handbook (7210.3M). The waiver of penalties is subject to the following limitations: (A) the alleged violation must be inadvertent and not deliberate, (B) it must not reveal an event subject to Section 609 of the Federal Aviation Act, (C) the reporter must not have been found guilty of a violation of the FAR's or the Federal Aviation Act during the preceding five years, and (D) the ASRS report must be submitted within 10 days of the event.

3. The ASRS professional staff is composed of retired controllers, as well as both active and retired pilots. To avoid conflicts of interest, ASRS analysts, researchers, and management personnel are not permitted to have ongoing employment relationships with the FAA, air carriers, or similar organizations.

4. ASRS's mailing address is P.O. Box 189, Moffett Field, California, 94035-0189.

For further information, contact:

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